

ABSTRACT OF THE DISCLOSURE

A giant magnetoresistive (GMR) element includes a first antiferromagnetic layer, a pinned magnetic layer in which the 5 magnetization direction is pinned by the first antiferromagnetic layer, a nonmagnetic material layer, a free magnetic layer in which that the magnetization direction of a central portion changes with an external magnetic field, a nonmagnetic layer, ferromagnetic layers formed on both side 10 portions of the nonmagnetic layer, and second antiferromagnetic layers for aligning the magnetization direction of each ferromagnetic layer in a direction perpendicular to the magnetization direction of the pinned magnetic layer. In the GMR element, the magnetization 15 direction of the free magnetic layer and the ferromagnetic layers are antiparallel to each other through the nonmagnetic layer, and at least the free magnetic layer, the nonmagnetic layers and the ferromagnetic layers have continuous surfaces  $\alpha$  at both end surfaces in the track width direction.

20 Furthermore, first electrode layers are provided in contact with the continuous surfaces  $\alpha$ , and second electrode layers are provided on the first electrode layers and the second antiferromagnetic layers.